Hatchery Update

Warm Springs National Fish Hatchery

The U.S. Fish and Wildlife Service operates 12 National Fish Hatcheries and one Salmon Culture Technology Center in the Columbia River basin. Warm Springs National Fish Hatchery is one of those facilities.

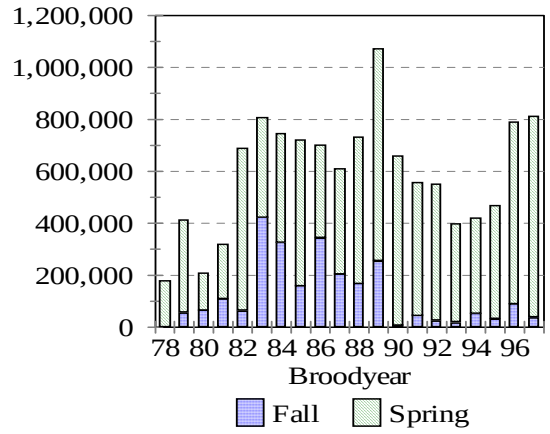
About Warm Springs National Fish Hatchery

The hatchery is located on the Warm Springs River within the Warm Springs Reservation of Oregon. Construction of the hatchery was authorized by an Act of Congress in 1966. Production began in 1978. The operation of the hatchery was considered pivotal for the enhancement of salmon to meet our tribal trust responsibilities.

Our Goal

The continuing goal of the Warm Springs Tribe and the U.S. Fish and Wildlife Service is to cooperatively operate the hatchery in a manner that will provide harvest opportunities and protect remaining wild fish populations. We strive to preserve their genetic integrity by maintaining the characteristics of Warm Springs fish and their production potential in both the stream and hatchery environment, minimizing the potential impact of hatchery fish on wild fish.

Hatchery Release in Fall and Spring

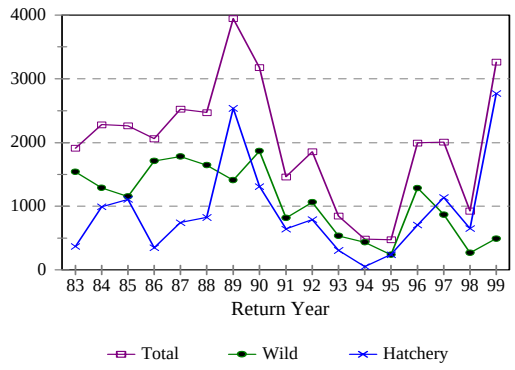


Objectives

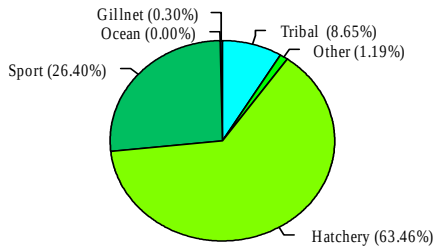
To accomplish this goal our specific objectives are to:

- Manage the fishery and broodstock to allow 1,300 wild spring chinook to spawn in upstream areas and retain 630 hatchery adults for broodstock.
- Pass only unmarked “wild” steelhead upstream of the hatchery to spawn.
- Include wild fish as 10% of the hatchery spring chinook broodstock.
- Not exceed 10% hatchery spring chinook in upstream spawning areas.
- Produce 750,000 spring chinook hatchery juveniles for on-station release.
- Mark hatchery production to distinguish from wild fish at return.

Return of Spring Chinook Salmon to the Warm Springs River



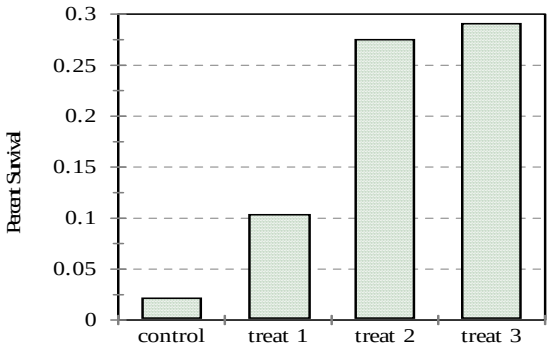
Hatchery Spring Chinook - Broodyear 1988
Catch & Escapement of 1,341 Fish



Hatchery Evaluation and Mark Recoveries

The marking program has made it possible to determine survival rates and contribution to fisheries. We also investigate various release groups to determine which of several treatments maximize adult yield. We have found that we can increase survival through volitional release, medicated feed treatments for control of bacterial kidney disease, and reduced rearing densities.

Survival of Release Groups
Broodyear 1993



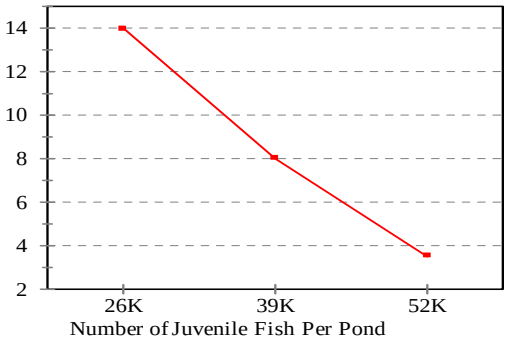
Control Group = forced spring yearling release; no medicated feed treatment

Treatment 1 = fall / spring volitional release; no medicated feed treatment

Treatment 2 = fall / spring volitional release; two medicated feed treatments

Treatment 3 = force spring yearling release; two medicated feed treatments

Density Study
and
Adult Recovery Per Pond
Broodyear 1992



26K = 26,000 fish per pond or 1.2 lb/cu.ft at release
39K = 39,000 fish per pond or 1.8 lb/cu.ft at release
52K = 52,000 fish per pond or 2.4 lb/cu.ft at release

Partnerships

The fisheries information collected in the Warm Springs and Deschutes River watersheds are key for making management decisions. This information is the result of collaborative efforts by Oregon Department of Fish and Wildlife, Confederated Tribes of the Warm Springs Reservation of Oregon, and the Service's Columbia River Fisheries Program Office, Lower Columbia River Fish Health Center, and Warm Springs National Fish Hatchery.

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